

AMENDMENTS TO THE CLAIMS

The listing of claims below replaces all prior versions and listings of claims. Only those claims being amended herein show their changes in highlighted form, where insertions appear as underlined text (e.g., insertions), while deletions appear as strikethrough text (e.g., ~~deletions~~) or enclosed in double brackets (e.g., [[deletion]]).

1. **(Currently Amended)** An apparatus for irrigating, supplying thermal energy to, and cleansing wounds, comprising: ~~characterised in that it comprises~~

a) a fluid flow path, comprising:

i) a conformable wound dressing, ~~having~~ comprising a backing layer which is capable of forming a relatively fluid-tight seal or closure over a wound and a wound-facing face, and at least one inlet pipe ~~for connection to a fluid supply tube, which passes~~ passing through and/or under the wound-facing face and directly or indirectly communicating with at least a fluid reservoir, and [[and]] at least one outlet pipe ~~for connection to a fluid offtake tube, which passes~~ passing through and/or under the wound-facing face, wherein a relatively fluid-tight seal or closure is formed over the wound at the point at which the or each inlet pipe and the or each outlet pipe passes through and/or under the wound-facing face; forming a relatively fluid-tight seal or closure over the wound, at least one inlet pipe being connected to a fluid recirculation tube, at least one outlet pipe being connected to a fluid offtake tube;

ii) a means for fluid cleansing in direct or indirect communication at least with the outlet pipe having at least one inlet port connected to a fluid offtake tube and at least one outlet port connected to a fluid recirculation tube;

b) ~~a fluid reservoir connected by a fluid supply tube to an integer of the flow path (optionally or as necessary via means for flow switching between supply and recirculation); and~~

a fluid recirculation tube for directing cleansed fluid from the means for fluid cleansing back into the inlet pipe so that at least nutrients, molecules, factors, physiologically active components and/or other components from the

wound dressing that aid in proliferation or that are favorable to the wound healing process are returned to the wound;

e) a device for moving fluid through at least the wound dressing and a means for fluid cleansing, ~~and optionally or as necessary the fluid supply tube;~~

~~d) the apparatus having~~ a means for supplying thermal energy to the fluid provided to [[in]] the wound so as to maintain the wound at a temperature between 34 and 40 degrees Celsius to optimize the metabolic activities of physiologically active components within the wound dressing and promote wound healing, and

~~e) optionally a means for bleeding the fluid flow path~~ flowpath to bleed fluid from the recirculation tube;[[,]]

~~such that fluid may be supplied to fill the flowpath from the fluid reservoir via the fluid supply tube (optionally or as necessary via the means for flow switching) and recirculated through the flow path.~~

2. **(Currently Amended)** An apparatus according to claim 1, wherein the ~~characterised in that it comprises~~ a means for supplying thermal energy to the fluid provided to ~~[[in]] the wound which is~~ comprises a heater and/or conductively heated component of the apparatus flow path in direct conductive contact with the irrigant and/or wound exudate.

3. **(Currently Amended)** An apparatus according to claim 1, wherein the ~~characterised in that it comprises~~ a means for supplying thermal energy to the fluid provided to ~~[[in]] the wound which is~~ comprises a radiative heater of the irrigant fluid and/or wound exudate.

4. **(Currently Amended)** An apparatus according to claim 1, wherein the ~~characterised in that it comprises~~ a means for supplying thermal energy to the fluid provided to ~~[[in]] the wound which is~~ comprises a conductively heated component of the apparatus flow path in direct conductive contact with the irrigant and/or wound exudate and, ~~in turn heated by irradiation from~~ a radiative heater of the irrigant fluid and/or wound exudate.

5. **(Currently Amended)** An apparatus according to claim 1, wherein the ~~characterised in that it comprises~~ a means for fluid cleansing ~~that is a single-phase system, in which the circulating fluid from the wound passes through the means for fluid cleansing and materials deleterious to wound healing are removed[[,]] without the circulating fluid coming into direct or indirect contact with another fluid in the means for fluid cleansing.~~

Application No.: 10/575,875
Filing Date: February 1, 2007

6. **(Currently Amended)** An apparatus according to claim 1, wherein the ~~characterised in that it comprises a means for fluid cleansing that is a two-phase system, in which the circulating fluid from the wound passes through the means for fluid cleansing and materials deleterious to wound healing are removed[[,]] by the circulating fluid coming into direct or indirect contact with another fluid in the means for fluid cleansing.~~

7. **(Currently Amended)** An apparatus according to claim 3, wherein ~~characterised in that in the means for fluid cleansing, the circulating fluid from the wound and the other fluid in the means for fluid cleansing are separated by an integer which is selectively permeable to materials deleterious to wound healing.~~

8. **(Currently Amended)** An apparatus according to claim 3, wherein ~~characterised in that in the means for fluid cleansing, the circulating fluid from the wound and the other fluid in the means for fluid cleansing are separated by an integer which is not selectively permeable to materials deleterious to wound healing, and the other fluid comprises and/or is in contact with a material that removes materials deleterious to wound healing.~~

9. **(Canceled)**

10. **(Previously Presented)** A method of treating wounds to promote wound healing using the apparatus for aspirating, irrigating and/or cleansing wounds according to claim 1.

11. **(New)** An apparatus according to claim 1, wherein the means for supplying thermal energy comprises a heater configured to supply thermal energy to the fluid in the fluid reservoir.

12. **(New)** An apparatus according to claim 1, wherein the means for supplying thermal energy comprises a heater configured to supply thermal energy to the fluid in the at least one inlet pipe.

13. **(New)** An apparatus according to claim 1, wherein the apparatus is configured such that at least a portion of the fluid flowing through the outlet pipe is directed to a waste reservoir.

14. **(New)** A method of treating a wound, comprising the steps of:

providing a conformable wound dressing configured to form a relatively fluid-tight seal around at least a portion of a wound;

providing an apparatus for irrigating and/or cleansing a wound comprising:

at least one inlet pipe configured to communicate with the dressing and configured to provide a fluid conduit so that fluid can flow into the dressing;

at least one outlet pipe configured to communicate with the dressing and configured to provide a fluid conduit so that fluid can flow out of the dressing, wherein the fluid in the wound dressing comprises physiologically active components;

pumping fluid through at least the inlet pipe, the wound dressing, and the outlet pipe;

cleansing the fluid that flows out of the wound dressing;

regulating the fluid that flows out of the wound dressing so that a portion of the fluid that flows out of the wound dressing comprising physiologically active components is recirculated back to the dressing after being cleansed and a portion of the fluid that flows out of the wound dressing is bled through a bleed mechanism and is provided to a waste reservoir; and

heating the fluid before the fluid enters the dressing to maintain the wound at an approximately normothermic range to optimize the metabolic activities of the physiologically active components within the wound dressing and promote wound healing.

15. **(New)** The method of Claim 14, wherein the normothermic range is from approximately 34 and 40 degrees Celsius.

16. **(New)** The method of Claim 14, wherein the step of heating the fluid before the fluid enters the dressing to maintain the wound at an approximately normothermic range comprises heating the fluid in the fluid reservoir to a temperature approximately within the normothermic range.

17. **(New)** The method of Claim 14, wherein the step of heating the fluid before the fluid enters the dressing to maintain the wound at an approximately normothermic range comprises heating the fluid in the fluid reservoir to a temperature slightly above the normothermic range.

Application No.: 10/575,875
Filing Date: February 1, 2007

18. (New) The method of Claim 14, further comprising the step of adjusting the proportion of the amount of fluid that is provided to the dressing after being cleansed and the amount of fluid provided to the dressing from the fluid reservoir.

19. (New) An apparatus for irrigating, supplying thermal energy to, and cleansing wounds, comprising:

- a wound dressing configured to form a relatively fluid-tight seal around at least a portion of a wound;

- at least one inlet pipe configured to communicate with the dressing and to provide a fluid conduit into the dressing;

- at least one outlet pipe configured to communicate with the dressing and to provide a fluid conduit out of the dressing;

- a fluid reservoir comprising irrigation fluid in fluid communication with the inlet pipe to supply irrigation fluid from the fluid reservoir into the dressing;

- a fluid pump configured to pump fluid through at least the inlet pipe, the wound dressing, and the outlet pipe;

- a fluid cleansing mechanism in fluid communication with the outlet pipe;

- a recirculation tube in fluid communication with the fluid cleansing mechanism configured to recirculate fluid cleansed by the fluid cleansing mechanism back into the inlet pipe, the fluid recirculation tube having a bleed valve to bleed fluid from the recirculation tube, the recirculated fluid comprising physiologically active components; and

- a heat source configured to heat the fluid before the fluid enters the dressing, the heat source configured so that the fluid maintains the wound at an approximately normothermic range to optimize the metabolic activities of physiologically active components within the wound dressing and promote wound healing.

20. (New) An apparatus according to claim 19, wherein the thermal energy provided to the wound maintains the wound between approximately 34 and 40 degrees Celsius.

21. (New) An apparatus according to claim 19, wherein the means for supplying thermal energy to the fluid provided to the wound comprises a heater and/or conductively heated

Application No.: 10/575,875
Filing Date: February 1, 2007

component of the apparatus flow path in conductive contact with the irrigant and/or wound exudate.

22. (New) An apparatus according to claim 19, wherein the means for supplying thermal energy to the fluid provided to the wound comprises a radiative heater of the irrigant fluid and/or wound exudate.

23. (New) An apparatus according to claim 19, wherein the means for supplying thermal energy to the fluid provided to the wound comprises a conductively heated component of the apparatus flow path in conductive contact with the irrigant and/or wound exudate and a radiative heater of the irrigant fluid and/or wound exudate.